Discussion.

Dr. Wm. Ophuls, San Francisco, made some remarks in regard to some work along these lines done in the last year at Cooper Medical College.

Dr. C. C. Warden, Los Angeles: If the work of which Dr. Ophuls spoke in his discussion is published, I am sorry I was not aware of it. The student who prepared these tonsils for examination had a great many specimens and prepared a great many slides and it has been very interesting to know know that he found such a large percentage of tubercular tonsils. The shrunken tonsil is more often considered tubercular than the hypertrophied tonsil.

PROCEEDINGS OF THE SAN FRANCISCO COUNTY MEDICAL SOCIETY.

During the month of April the following meetings were held:

Section on Medicine, Tuesday, April 4th, 1911.

1—Exhibition of Cases Demonstrating the Treatment of Tic in Childhood. E. C. Fleischner. Discussed by Drs. Porter, Horn, Fleischner.

2—Demonstration of Cases. Cervical Adenitis (syphilis, tuberculosis and cancer). René Bine.

3—Report of Medical Cases. (a) Polyposis Intestinalis. (b) Acute Thyroiditis. (c) Coccidioides of Lung. Jule B. Frankenheimer. Discussed by Drs. Dickson and Ash.

4—Obesity: Its Etiology and Treatment. René Bine. Discussed by Drs. Perry and Bine.

General Meeting, Tuesday, April 11th, 1911.

1—Demonstration of Patients with Esophageal Disease, (with X-Ray demonstration). C. M. Cooper. Discussed by Drs. Schmitt, Krotoszyner, McClenahan, Cheney and Cooper.

2—Demonstration of Case of Bilateral Sciatica. Sol. Hyman.

3—Theories of Anaphylaxis. Hans Zinnser. Discussed by Dr. Kuhlman.

Section on Eye, Ear, Nose and Throat, Tuesday, April 25th, 1911.

1—The Education of the Deaf Mute. Mr. Warring Wilkinson.

2—Report on Recent Ear, Nose and Throat Literature. M. W. Frederick.

Obesity—Its Etiology and Treatment.

By RENE BINÉ, M. D., San Francisco.

Just as Venus personified feminine beauty, Apollo masculine grace, and Hercules masculine strength, so did jolly Silenus, son of Pan, foster-father of Bacchus, frequently intoxicated, bloated, with bald head, pig nose and pimply face represent a type well known to the ancients.

And ever since those days of old, have mortals more or less blessed or cursed with a superabundance of adipose tissue unevenly distributed throughout their anatomy, been subject to the ridicule of their leaner fellows.

Hippocrates and Galen, however, men of keen observation, did not indulge in witty remarks at the expense of fat men and women, but noted their lack of resistance to acute infectious diseases and their comparatively early deaths.

So that we physicians are not only complying with the dictates of our artistic temperaments when we restore sylphlike forms to these pyramids of flesh, but we are more often practicing genuine prophylactic medicine, and while we are informed that an ounce of prevention is worth a pound of cure, so can pounds removed from these huge individuals often be measured in months or years added to their enjoyment of life.

To be sure, the etiology of obesity is a trifle complicated and before discussing its treatment, which after all is what interests the patient, we must look into these casual factors a little more closely, so as to get a better understanding of the various methods that have been and still are advocated in the medical journals and advertising columns of the lay press.

Obesity is after all but a pathological expression of a normal process. It is most often encountered in those people who eat when they're hungry, and drink when they're dry,—or think they are,—or fear they will be, or simply have the habit. It is astonishing how many of them overeat. Oh, no, at one meal you might not notice it, but it is the persistent intake of small excesses that leads to the obesity which these persons consider unavoidable. A daily excess of 200 calories above the maintenance diet means an addition of about 20 grams of fat daily or of 15 pounds a year, which with the other substances, particularly water, deposited in conjunction with the fat, will add about 20 pounds to the body weight. These 200 calories, Noorden states, are e. g. contained in 1/3 litre of milk, 25 grams of butter, 70 grams white bread, 4/10 litres of beer, 200 grams fat-free meat, etc. The writer whose average weight has been around 160 pounds reached 180 pounds in 1904, when in Vienna, during a period of five months, he averaged a daily addition of a pint to a pint and a half of heavy Münchener beer to his ordinary diet.

It must be further borne in mind that the loss of body heat by radiation in the obese is less than in the thin subject, who exposes proportionately a much greater surface, and this point must be considered by those who figure out diets by rule of thumb—so many calories to the pound.

Lack of exercise is another great fat accumulator. You have all seen the measured tread and slow gait of the portly gentleman who takes life easily and knows of no worries but those of putting on his shoes and keeping cool on hot days. In contrast you have observed his friend, the lanky chap who lives with him, eats the same food, aye, in greater amounts, in wild attempts to lose the sobriquet "skinny." You have seen him impatiently tapping his foot when the food was not immediately brought him, fidgeting in his chair while eating it, and then you have seen him walk swinging his arms back and forth as if his legs were not his real organs of locomotion. These are the things which account for the nervous, wiry man telling you that he can't get fat, no matter how much he eats, and for the corpulent one's belief that he always will be fat, no matter how little he eats. And of course we have here a very vicious circle. The fatter one gets, the less one exercises. Just think, you with your 150 pounds, how much would you care to do if you had to pack some 75 to 150 pounds extra load? Occupations also thus frequently favor the onset of obesity by a combination of overeating and a lack of exercise,—e. g. monks, butchers, bakers, innkeepers, brewers, and we might add policemen, are usually stout, but as Joslin says, who has ever seen an obese letter carrier? We often hear patients speaking of hereditary obesity, and physicians of constitutional obesity,

due to a perverted metabolism. But who can really estimate the amount of muscular exercise and the energy thus used up in any given case? There are, however, cases where scientific observations have demonstrated that though eating less and exercising more than normal, obesity may occur, so that one is obliged to return to Bouchard's theory of ralentissement de la nutrition, a slowing of metabolism,—to the belief that less caloric energy is developed per kilogram of protoplasm than in the normal. Experiments in regard to the amount of oxygen consumed by such obese persons, have seemed to confirm this theory, but in only a very few instances.

The influence of such organs as the thyroid, hypophysis, suprarenals, thymus, pancreas and sexual glands must be likewise considered. We know of but two diseases where in spite of a large intake of food, progressive and rapid emaciation may occur,—viz., Basedow's and diabetes. And just as in Basedow's disease, an increased or perverted secretion increases the intensity of the oxydation processes, so do we see the opposite condition in myxedema, where it is decreased at times to 50% of the normal. There are furthermore, numerous cases of hypothyroidism which do not present the classical symptoms of myxedema, but which may account for some cases of so-called constitutional obesity. And some observers have reported quite rapid increase in weight in thyroidectomized animals, but it must be admitted that these instances are exceptions.

In connection with this question of the influence of thyroid secretion upon metabolism, we wish to mention the syndrome which Dercum in 1892 named adiposa dolorosa. Its essential features are (1) the occurrence of circumscribed, very painful subcutaneous fatty tumors, located in various parts of the body, associated with (2) a diffuse lipomatosis (3) great muscular weakness and (4) psychic manifestations.

Of nine recorded cases with autopsy reports, 8 showed more or less marked changes in the thyroid; in the other case a normal thyroid was found, but an adeno-carcinoma of the hypophysis was discovered. Furthermore, in the five other cases where this was investigated, gross changes were found in the pituitary body in three, and miscroscopic changes in two instances.

So that while the pathological findings might seem to confirm the hypothesis that this syndrome is associated with a perverted thyroid function, the participation of the hypophysis and perhaps of the sexual glands, cannot be excluded. The extreme view held by some French writers, that Dercum's syndrome is purely an obesity associated with hysteria, has never received any support.

Thyroid medication has often been employed, and while two cases have been reported as cured, and varying degrees of improvement claimed in others, in a large number of cases, not the slightest amelioration could be detected.

The association of cerebral tumor or other cerebral disease with obesity has been long recognized, but attention has really only been focused upon it since Frohlich's publication in 1901. In 1908 Marburg collected thirty-five cases of hypophysis disease associated with adiposity, but there are likewise many cases of disease of this gland without any tendency to fat accumulation.

It is a well known fact that the common domestic animals and fowls usually become large and plump following castration, and it is generally believed that women tend to obesity at the menopause, or after the removal of their ovaries. According to reports, eunuchs are frequently quite stout. But all this does not tell us whether the lack of internal secretions from the glands produces the slightest decrease in catabolic processes, or whether the result is due to changes of temperament, lessened activity and changed modes of living. As McCrudden remarks, "Anyone who has compared the active quarrelsome life of a cock with that of the placid capon can see that a cock might be expected to be lean and tough."

Furthermore, thousands of women have been followed for years by a number of clinicians, and a thorough search through their statistics shows that at the most, 40-50% of the women take on fat when castrated, or at the menopause. In many other instances the patients became leaner.

Metabolism studies of castrated animals have been undertaken to help out on this important question. Loewy and Richter, who experimented on dogs, in 1899, maintained that castration did produce a delayed oxidation, but Lutbje's very careful observations on animals of both sexes went far to disprove this. Paechtner in 1906 argued in favor of this same theory, but more recently, (Feb. 1910) McCrudden, who observed two healthy male and two healthy female dogs for a period of twenty days before and after castration, and controlled and carefully analyzed all food, urine and feces, showed that castration does not cause a decrease in oxidation and a retention of material,—in fact, if anything, a general tendency in the other direction.

There is no doubt that the different glands of internal secretion play a role in the production of some cases of obesity, but it is impossible with our present knowledge of the subject, to do more than hint at their possible relationships knowing as we do that removal of the thyroid is frequently followed by enlargement of the hypophysis; that acromegaly is often complicated by symptoms pointing to a deficient thyroid secretion, and that thyroid hypertrophy is usually present in cases of extirpation or failure of development of the genital organs.

And furthermore these cases are after all but a very small percentage of the large class of adipose persons, most of whom owe their surplus weight to the factors discussed in the first part of this paper, and it is to this group, rather than to the poorly defined one last discussed, that most of the following remarks are addressed.

Vanity drives a number of stout persons to physicians for advice in the matter of reduction cures. The severer grades of obesity usually produce symptoms in the course of time, for which relief is sought. Even in the absence of lesions of the respiratory tract, dyspnea frequently results, the fat masses in the abdomen and the abdominal wall impeding the excursions of the diaphragm, and fat around the heart likewise hindering its movements. Fat in the mesentery and perirenal regions furthermore keeps the diaphragm abnormally high. In addition to all this, more energy is required to move a heavy body than a light one and the heart is usually small in proportion to the weight. Coronary sclerosis frequently complicates the picture, being due most often to the same causes as the obesity. It remains to be shown that fatty deposits can directly compress and damage the cardiac muscle, though this belief is thoroughly rooted in most minds as a proven fact.

Many patients come for bronchitic, asthmatic, neuralgic or renal troubles. Still others, suffering from chronic joint troubles, or deformities, find their increased weight hindering locomotion.

The greatest caution must be observed in reducing children, old persons, tubercular patients and patients with contracted kidneys; as a general rule these cases should be treated in hospitals where they can be accurately observed, for thus only can harmful results be avoided. And except cardiac conditions

necessitate it, a diabetic should never be reduced.

Extreme cases of obesity are best handled for a while in hospitals. But the great majority of our patients will refuse this and as a matter of fact in most instances we will have to be content with ambulatory methods.

The great trouble with the obese patients who come for treatment is that they, figuratively speaking, expect to melt away. And nobody will deny that rapid losses of weight can be obtained under the proper conditions. But that is not the writer's method of choice, even in extreme cases of obesity, unless there be impending cardiac failure. Many are the cases that he has seen in the famous resorts of Europe, where not only natives, but wealthy Americans flock, in endeavor to undo twelve months' erroneous living. And he has seen them after a four and eight weeks' cure, from 20 to 50 pounds lighter in weight, with faces wrinkled, frequently weaker than at the beginning, especially those cases which were not under close medical supervision, and he has seen them—soon after their emancipation, longing for some article of diet of which they had been deprived, and still later has he seen them rid of these longings—unconsciously or consciously regaining the weight lost at a cost of so much time, money and discomfort.

To be successful, the cure must be permanent. That almost goes without saying. But for the cure to be permanent, the treatment must be continued over a long period of months, years,—aye, a lifetime. It is a new method of living that the patient must be taught. And to accomplish this, the change must not be so radical a one as to cause suffering, and the loss of weight need be only rapid enough to convince the patient that the loss is a slow but steady and sure one.

As a matter of fact, paradoxical as this may seem, we frequently have to deal with poorly nourished obese individuals. An accumulation of fat is not a sign of robust health, as is well exemplified by the frequency with which one encounters obesity in typical cases of chlorosis and in chronic alcoholism. Our duty therefore lies most often in improving the general nutrition of our patients at the same time that we are reducing their surplus adipose tissue.

The first thing to do is to determine, if possible, what causes have led to the accumulation of fat in the individual case. And the instructions one must give patients will have to do not only with food and drink, but with mental and physical exercise, dress, sleep and a general regulation of their mode of living.

As a preliminary, it is often useful to have the patient prepare a careful record of the food eaten for a week before instituting treatment. This gives one an idea of the amount of food necessary to maintain their condition of obesity and furthermore serves a useful purpose in assisting the physcian in making out a diet list and will prevent one's telling a patient to cut out from his diet things he never eats or never heard about, or ordering a teetotaler to cut out champagne, liqueurs, etc. The amount of exercise should likewise be recorded. From the tables given below one can roughly estimate the percentage of protein, carbohydrate and fat as well as the caloric values of the food consumed. [N. B.—Not included in this issue.]

It is a very easy matter to bring about a loss of weight, as even the more corpulent subjects in the famine districts of Russia and China ever testify, but the greatest care is required to have the patient lose quantitatively, fat, and not qualitatively, albumins.

The normal ration for a man at moderate work is usually given at approximately 100 gms. protein, 450 gms. carbohydrates and 75 gms. of fat. Were we to omit all carbohydrates and fats from the dietary, which of course is not only impossible but dangerous, we would have a deficit of 2475 calories and the body would in consequence burn 275 gms. of its stored up fat. At this rate there would be a loss of 8.10 kilos a month. How can we therefore expect great losses in weight without at the same time producing a loss of albumins—just the thing we wish to avoid?

The exclusion of fat alone in the above diet would theoretically produce a loss of 5 pounds a month, 60 pounds in a year, but even then, by diminishing the carbohydrates, one need not punish a patient by the exclusion of all fat. The omission of oil, butter, cream, and fat on meats is easily carried out by any patient, and cutting down on pastry, sweets, bread, etc., is seldom of any difficulty. To reduce the intake to a still greater extent, still more fat could be omitted, e. g. such as is used in the preparation of various dishes, vegetables, sauces, etc., and carbohydrates can be further restricted by the omission of dishes made from flour, stewed fruits, milk and soups containing flour. The absolute exclusion of fat is practically impossible, for even the leanest meat, bread, skimmed milk, eggs, etc., contain some, and so do the green vegetables.

There is absolutely no need for the restriction of water, such as frequently ordered by physicians or self-prescribed by patients. It is a fact that many obese individuals are hearty drinkers, but usually of wine, whisky or beer, the latter particularly furnishing a high caloric value. Furthermore, tea, coffee, and light wines often stimulate the appetite and lead to overeating, and their omission renders a food restriction more tolerable. There are no scientific observations on record which can be used to demonstrate the influence upon fat accumulation, of fluids as such, taken with food. As regards the fat cells themselves, they contain on an average of 15% water, and this seems uninfluenced by increasing the fluid intake. In Alsace, where the geese are stuffed, but little water is given, and this is also the rule amongst raisers of livestock, whereas, the abundant administration of water renders fattening very difficult. If a patient is forbidden water with meals, for a time less food is consumed, but one soon becomes accustomed to this new habit, and the appetite returns to its former level. At times a dry diet is even followed by gastric and intestinal disturbances, renal colic, gouty attacks or protracted neurasthenia. So that while theoretically as well as practically but little can be stated as to the real effect of water, the writer believes that the greater the amount of water consumed, the better are the tissues flushed and the products of metabolism eliminated, and he therefore makes a practice of restricting fluids taken with meals, but insists upon the copious drinking of water between meals. The restriction of fluids in the treatment of obesity was introduced by Oertel, who had tried it on himself with astonishing success, but it was lost sight of by others that Oertel, in addition to his kypo-scoliotic spine, was not only an obese but a cardiac, and that his fluid consumption consisted of several litres of good old Münchener beer, rich in carbohydrates. In cases of obesity, complicated by cardiac lesions, fluid restriction is sometimes indicated.

The introduction of salt free dietaries in our therapeutic armanentarium by Widal, Javal and Strauss, naturally led to their trial in obesity. Cutting out salt is always followed by a loss of a few pounds in weight, but this loss is probably mostly water, and is regained as soon as salt is again added to the food, and even at times without this addition. The absence of salt interferes with the palatability of certain foodstuffs for some people, and in this way prevents over eating, but as a rule this restriction is not essential, except, of course, in cases accompanied by cardiac weakness or in renal conditions associated with a sodium-chloride retention.

In the choice of foods, it may therefore be generally stated that we will recommend those most bulky, distinguished by their ability to satisfy hunger's cravings, rather than to nourish. And a reduction cure to be successful should be so regulated

that the subject's appetite is well satisfied.

Dark breads are preferable to the white ones, containing as they do a far greater proportion of indigestible particles, and therefore furnishing proportionately less nourishment while being "more filling" at the same time.

Forbidding potatoes is another point to which attention must be drawn. Is not the poor fat person sufficiently tortured without the deprivation of this article of diet, so universally beloved, relatively so cheap, and served up in so many appetizing forms? One large baked potato furnishes far less calories than the average breakfast roll or five lumps of sugar.

To go to the other extreme and institute a potato diet as does Rosenfeld, this to be kept up for months until the reduction is accomplished, and then one to two days per week, is so obviously unattractive to all patients as to require no further criticism.

While most authorities forbid soups, the writer can see no objection to such an article, very poor in nutritive value in proportion to its volume, provided it is not made rich by carbohydrate or fat additions.

The writer has in all reduction cures insisted upon the patient's using saccharine in place of sugar as an ordinary sweetener. It is a derivative of benzoic acid, and not a sugar, though five hundred times as sweet, and undergoing no transformation is excreted as such in the urine. 0, 05-0, 1 gm. per day is usually sufficient. If 40 gm. of sugar in the daily diet is thus replaced by saccharine, more than one pound of fat can be burnt up per month.

There are a great number of dietetic schemes and regimes to be found in the literature. The systems advocated by Banting, Ebstein, Oertel, Schweninger, Weir-Mitchell, Yeo, Dujardin-Beaumetz, von Noorden, Bouchard, Chambers and Debove all have numerous followers except the first mentioned which is so severe in its restrictions as to be harmful rather than beneficial. They vary greatly in the amounts of albumins, carbohydrates and fats, but all agree in a very low total caloric equivalent. As above mentioned, the writer favors the ones with the high percentages of proteins in the majority of cases.

It is best to draw up a definite diet list for each individual, based, as previously stated, upon the patient's list, and giving quantitative as well as qualitative instructions. Patients find that it is no hardship to weigh their foods for a few days if necessary, or if they be so situated as to render this impossible, they can easily be made to estimate the amount required.

In general, you may tell your obese patients that they can partake of almost any kind of meat (raw, boiled or roasted) or fish provided that it is lean, and the amount moderate. Tell them to eat all the lettuce, rhubarb, spinach, leeks, cress, celery, Brussels sprouts, cabbage and other green vegetables they desire. Goose, duck, pork, sausage, liver, kidney, marrow, patties and such vegetables as peas, beans, corn, beets they are to avoid. Cereals and breadstuffs, macaroni, spaghetti, cornstarch, etc., must be eaten sparingly, if at all. The only fruits to avoid are bananas and nuts. Tell them to avoid butter, olive oil, cream, pastries, candies and jellies. Cheese, being very rich in protein, is to be highly recommended, especially varieties with the lower fat content such as cottage cheese. Whey is likewise of value.

In one of the writer's cases, where a rapid reduction was desirable, occasional milk days were tried with success. About once a week the patient remained at home, and the only food consumed consisted of one litre of milk and one or two eggs. But this treatment necessitated cessation of exercise on the milk days, and this being impractical, it was discontinued. Incidentally, this particular patient, aged 38, was without much difficultv reduced from 327½ to 219 pounds from September 2, 1908, to February 17, 1910. Since that time, conditions have been such as to oblige her to forego all attempts at treatment, and she reported after an absence of 11 months, weighing 246¾. During the last 8 weeks she has lost 6¾ pounds. Another patient was reduced 43 pounds in four months without recourse to this milk diet. In cases of cardiac incompetence the writer does not hesitate to institute this so-called Carrell-cure, but then of course, the conditions are vastly different and so are the therapeutic indications. The average cases of obesitv (the two here mentioned are extremes) should not be made to lose over one-half to one pound per week.

In every instance, but particularly for those with a tendency to muscular laziness, exercise should be prescribed, as it favors the retention of body protein, builds up muscle and is done at the expense of the sugars and fat. The amount prescribed should be moderate at the start and slowly but gradually increased. Many patients who are loaded down with fat at the onset of the treatment, are delighted with the ease with which they can get about as time goes on,—they feel lighter, their muscles get more powerful, their wind improves, and chronically stiff joints limber up. Walking and climbing are the exercises most easily carried out, but horsebacking riding, cycling or gymnastic exercises can be employed. Where chronic cardiac lesions, muscular weakness or paralysis interfere, massage and passive movements can be employed, but as far as producing any effect upon the reduction cure is concerned, even a good German author requires the word "humbug" to express his sentiments.

One has but to visit the various Turkish and Hammam bath establishments in any city to see obese individuals engaged in what they term "sweating off their fat." The scales show a loss of two to five or even more pounds and the scales don't lie. But the scales cannot tell these deluded creatures that their loss is mostly one of water and that fat must be starved and worked away.

Swimming is excellent exercise, and, in many instances, to be recommended. Cold baths, or cold half baths followed by cold rubs are advocated by Noorden and others, but the writer believes that he has seen just as good results with the use of warm baths (40° C), to which no patient objects, and which furthermore are usually followed by a sensation of well-being and refreshment, and seem to strengthen rather than to weaken.

Clothing should be so arranged as to favor free respiration and not to hinder diaphoresis. Sleep should be limited to seven or eight hours in the twenty-four, Pettenkofer and Voit having shown that sleep favors an accumulation of fat.

In spite of the numerous anti-fat remedies advertised in the lay press, there is no drug cure for obesity. Marmola, Kellogg's Obesity Food, Arbolum Mixture, Rengo, Protonuclein are in daily use. The only active principles in Marmola have been shown to be the extracts of phytolaca berries and of thyroid, while Rengo consists mostly of thyroid, poke-root and cascara. These remedies effect their greatest reduction in the patient's purse and chiefly benefit their manufacturers.

There is no need for our resorting to thyroid medication unless the clinical picture is clearly one of hypo-thyroidism, or unless a conscientious dietetic and exercise regime fails to produce any benefit and thus leads us to suspect some glandular fault. The grave danger in thyroid medication is the destruction of protein which may surpass that of fat, unless a high protein ration is ordered. It has been definitely shown that at times thyroid medication destroys muscle, prevents the combustion of fat and lengthens the reduction cure. In a few instances a rapid loss of weight occurs but is followed by a period where even very great doses are devoid of any action on the weight.

The large doses necessary to bring about the loss of fat desired by the obese, are more apt to

be followed by symptoms of Basedow's disease than by the expected decrease in weight. Adults should never exceed a gradual increase of thyroid extract beyond 3 gr. daily, and children beyond ¾ gr., and at that, thyroid medication should never be long continued. In but one case did the writer resort to the administration of thyroid extract, and then purely for experimental purposes, and the loss of weight was if anything retarded rather than accelerated thereby. Magnus-Levy believes that the loss of weight following thyroid medication is frequently, in a great measure, due to the increased nervous excitability and greater exercise in otherwise phlegmatic individuals.

Ovarian tablets are occasionally useful adjuncts in the obesities accompanying or following an artificial or natural menopause, and the writer knows of one case where their administration apparently played a most successful part in a reduction cure. They can do no damage and can therefore be tried without fear if conditions warrant.

The administration of laxatives is frequently necessary, but attempt to prevent fat absorption by continued brisk purgation is most irrational, the protein absorption being just as apt to suffer.

A drug most often indicated, and which the writer invariably prescribes, more as a blood food than as a drug, is iron. As already emphasized, most of our obese patients are qualitatively underfed and need building up along the right lines. Many of them require cardiac stimulation, for a short or long period, and digitalis is most often of benefit in these instances. Combined with diuretin it is of value where there is a tendency to edema.

The writer often prescribes a pill of powdered digitalis leaves gr. ss, reduced iron gr. 1, extract rhubarb gr. 1, or some such combination.

In conclusion, it should be emphasized that inasmuch as obesity is the exaggeration of physiological processes, its treatment must rest upon a purely physiological basis. If safety is considered, there is no short cut to the desired end. Prolonged treatment is both safe and sure, and if these facts are borne in mind by all, and put into practice by those called upon to reduce the great heavy-weights, the writer is certain that the beauty of the latter will not only be enhanced, but their muscles made firmer, their existence more comfortable, and their lives lengthened.

BIBLIOGRAPHY.

Of the references liberally quoted, and not credited in the text, the following deserve mention:.

Mathieu: Hygiene de l'Obese, 1906.

Lyon: Adiposis and Lipomatosis. Archiv. Int. Med., July, 1910.

Bornstein: Diatetische Kuren. Wiener Klinik, 1907.

Krehl: Lectures in Univ. Heidelberg, 1907.

Discussion.

Dr. A. W. Perry: I have devoted a great deal of attention to obesity. I have always found that where I could reduce the water in the system I could reduce the obesity and the complaints associated with it. I believe that the proximate cause of obesity is dilatation of the lymph spaces, the elastic fibres becoming weakened, due to the large accumulation of lymph. A more remote cause is the inherited or acquired inability of the renal cells to excrete salt sufficiently. Where the normal amount of chloride of sodium is taken into the body per day, that is 12-15 grams which is sufficient for all needs of the body, if 20 grams are taken and 15 grams is excreted every day, 5 grams of salt is accumulated and this requires a kilogram of water retained in the body to dilute the serum to what is agreeable to the body. In regard to the reduction of weight by the restriction of drink, I always take the blood pressure of the patient in an attempt to reduce the weight and where the blood pressure is high I can always reduce by the restriction of water, but I have seldom been able to do anything with the people whose blood pressure is low. Where obesity is associated with bronchitis or heart disease I think the obesity offers very important therapeutic indications. I have had a number of cases of bronchitis and asthma, lasting over periods of from 10 to 15 years, in which these conditions have been relieved by reducing the weight, and always by restriction of water. It is not advisable to reduce the food beyond 2500 calories per day, it is better to give too little than too much liquid.

Dr. René Bine: I was familiar with Dr. Perry's views on the subject as it is but a comparatively few years since he presented them to this Society. But I am convinced that there are no proofs for his contentions. We are all familiar with the results of Widal, Javal and Strauss, who by means of salt-free diets and restriction of fluids, brought about great reductions of weight in cases of cardio-renal disease, the loss being due to the getting rid of edemas and of what Widal styles pre-edemas. But in obesity no restriction of fluids, per se, is capable of causing either a permanent loss of weight, or of causing even a marked loss, however temporary it might be.

Demonstration of Case.

RENÉ BINE, M. D., San Francisco.

Case 2. Adenitis; syphilis and tuberculosis. L. G., age 17, waiter. Had measles and diphtheria during childhood. He contracted "Dhobee Itch" in the islands, two years ago, and on his return was no sooner cured than, while he had a severe cold, the glands on the left side of his neck began to swell, this in July, 1910. Since then the glands have become smaller, but enlarge with every fresh cold. Examination revealed a general enlargement of the glands; the left cervical were exceedingly large, fairly hard, not adhering to the underlying tissues or to the skin, and ovoid and painless. One bunch seemed matted together. The epitrochlears were quite distinctly enlarged, as were the axillary, inguinal and the other chains in the right and left cervical regions. The spleen was easily palpable fully two inches below the left costal margin on ordinary inspiration. The tonsils were definitely diseased. Other than this there were practically no other abnormal physical signs. The diagnosis had naturally to be made by elimination, for lues, tuberculosis and Hodgkin's disease had to be borne in mind as possibilities. The blood examinations revealed a normal red, white and differential count. Wassermann and Noguchi reactions were * * * (Dr. L. S. Schmitt). Calmette and Moro tests were positive, the Pirquet was negative. This was all very interesting, for the presence of positive Wassermann and Noguchi reactions have been reported in Hodgkin's disease, where lues could practically be ruled out. On the other hand, the glands in the left cervical region impressed us as possibly independent of the general condition, most probably tubercular, with the tonsils as portal of entry for this infection. Under local anesthesia, a gland was removed from the neck, and section made. No changes as seen in Hodgkin's disease were found, whereas a few tiny grayish foci could be distinguished macroscopically, and while no tubercles were seen microscopically, foci of epitheloid cells suspicious of tuberculosis were found. Some of the gland material was triturated in normal salt solution and the resulting fluid injected subcutaneously into left thigh of a guinea pig. One month later large gland found in left inguinal region, smears from which showed tubercle bacilli. The diagnosis is thus made;—the boy has tuberculosis of the left cervical glands, and also syphilis. He has been given an injection of salvarsan, is continuing with mercurial inunctions and iodides, and we now intend to treat his tubercular glands with tuberculin, though should any signs of extension of this process, or caseation occur, we shall not hesitate to advise radical surgical treatment.